

## DVCS analysis update for EG6 meeting

### Tuning the $^4\text{He}$ track parameters

- After the first and the second round comments, the  $^4\text{He}$  track parameters have been tuned by looking at these parameters after the DVCS exclusivity cuts.
- In figure 1, I list the  $^4\text{He}$  DVCS track parameters with the updated cuts.
- These cuts were applied to the following two analysis sets, except sdist cut on the old analysis set was [-3:3].

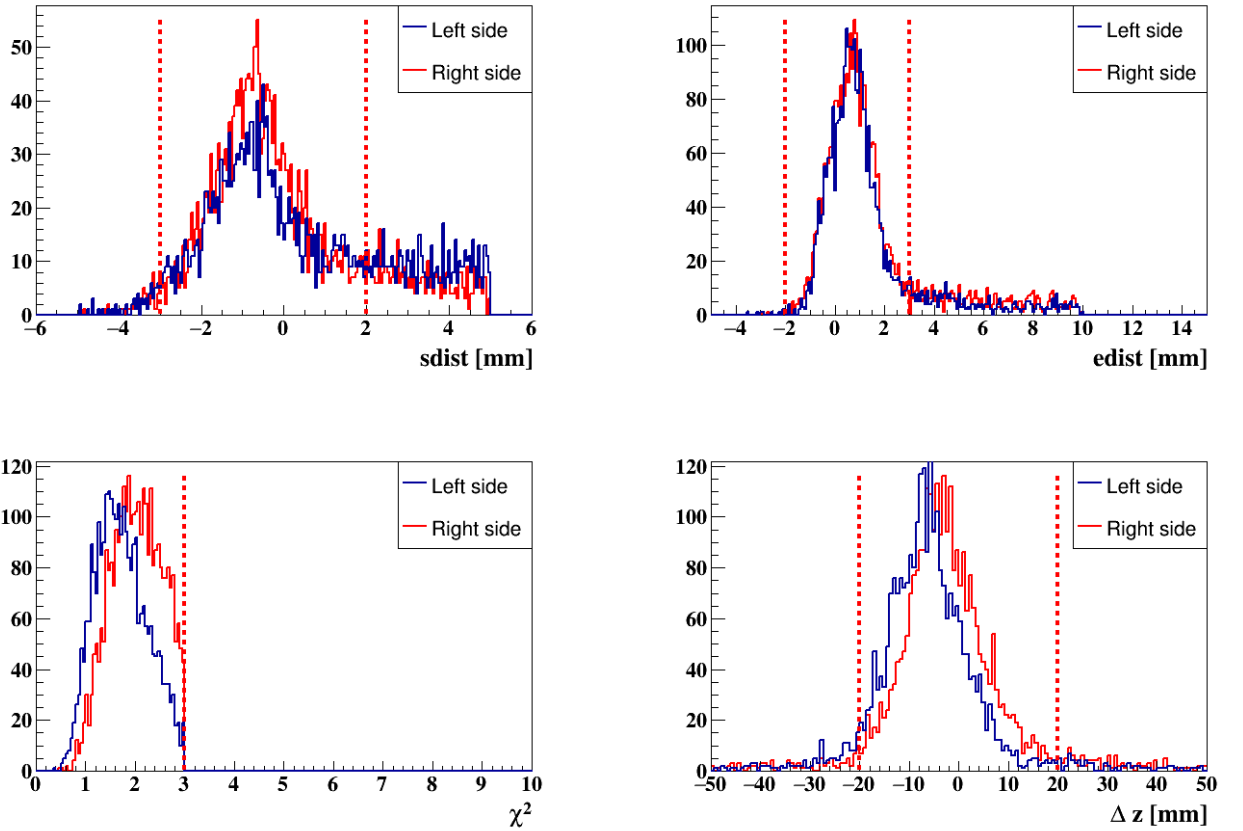


Figure 1: The distributions of the  $^4\text{He}$  DVCS track parameters after applying the exclusivity cuts with the final cuts.

### Exclusive distributions and reconstructed $A_{LU}$

After the suggestion from the review committee, I have changed the cut on the missing energy to be from [-0.45, 0.5] instead of a  $3\sigma$  cut on the distribution and refined all the other exclusive cuts. Figure 2 presents the old and the new distributions for the exclusive variables.

- Note in the following plots, I will label the two analysis sets as "old", 3 sigma cuts on all the variables, and "new", with the new missing energy cut and the corresponding updated 3 sigma cuts on the other variables.

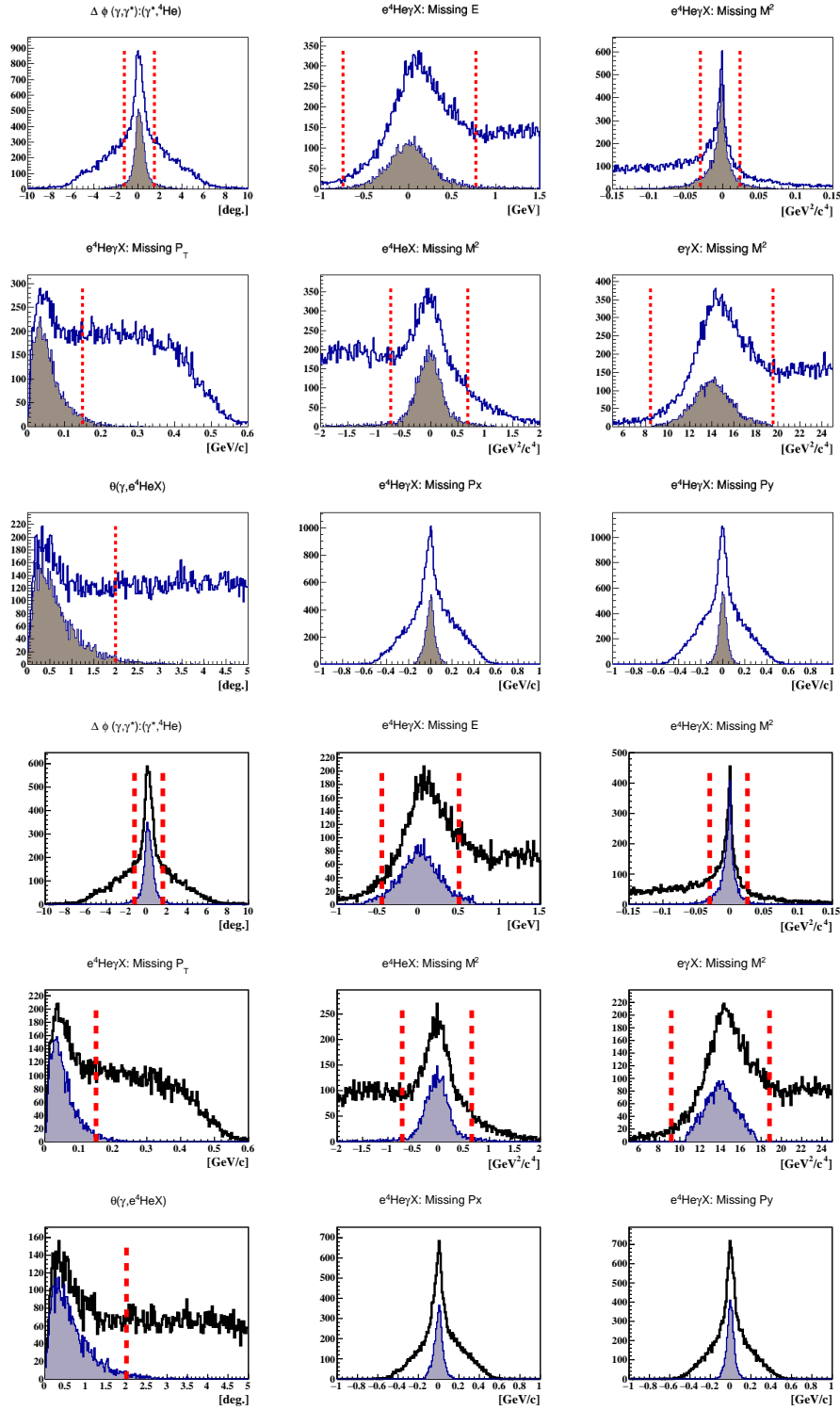


Figure 2:

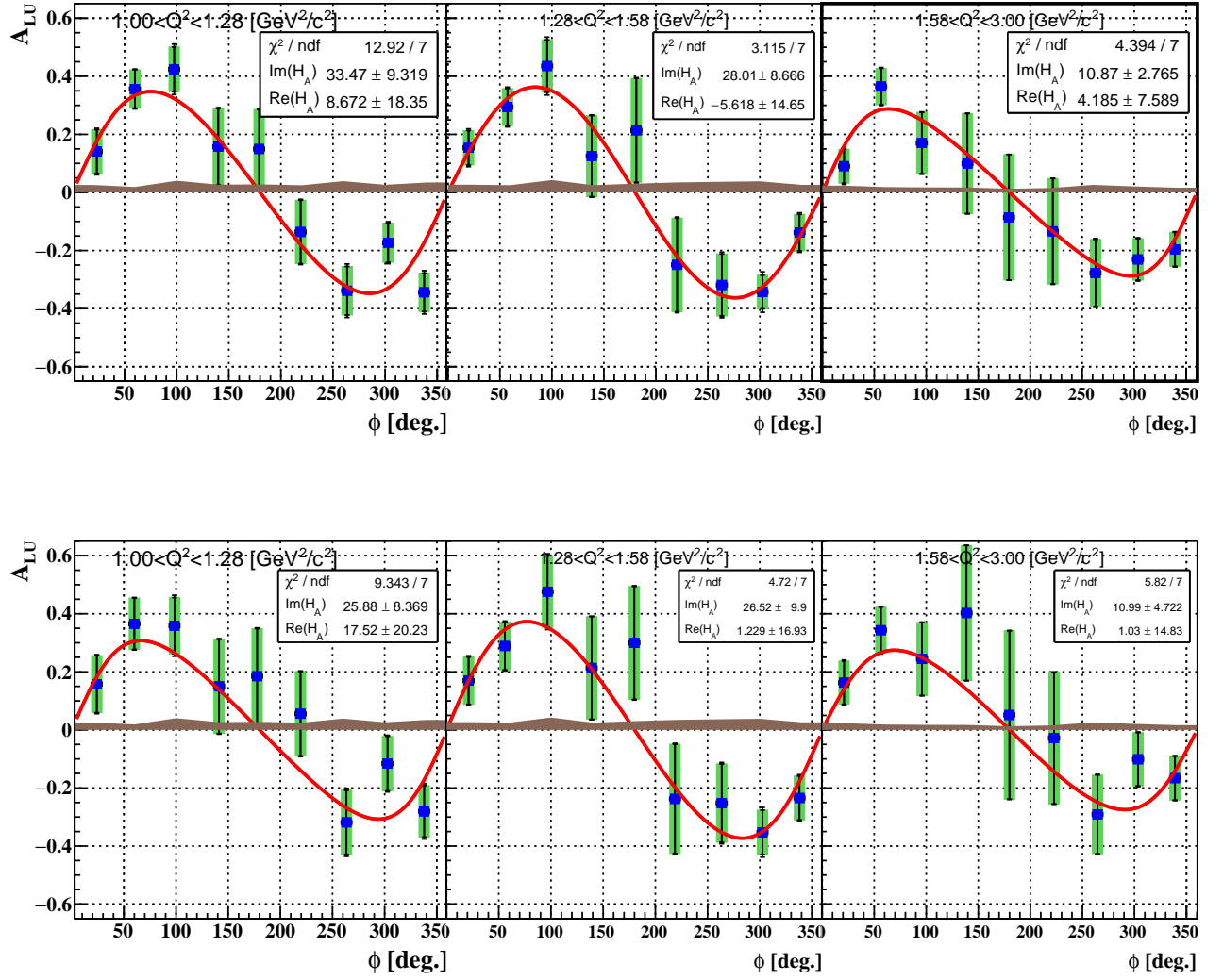


Figure 3: Coherent  $A_{LU}$  as a function of  $\phi$  in  $Q^2$  bins for old (top) and new (bottom) selection sets.

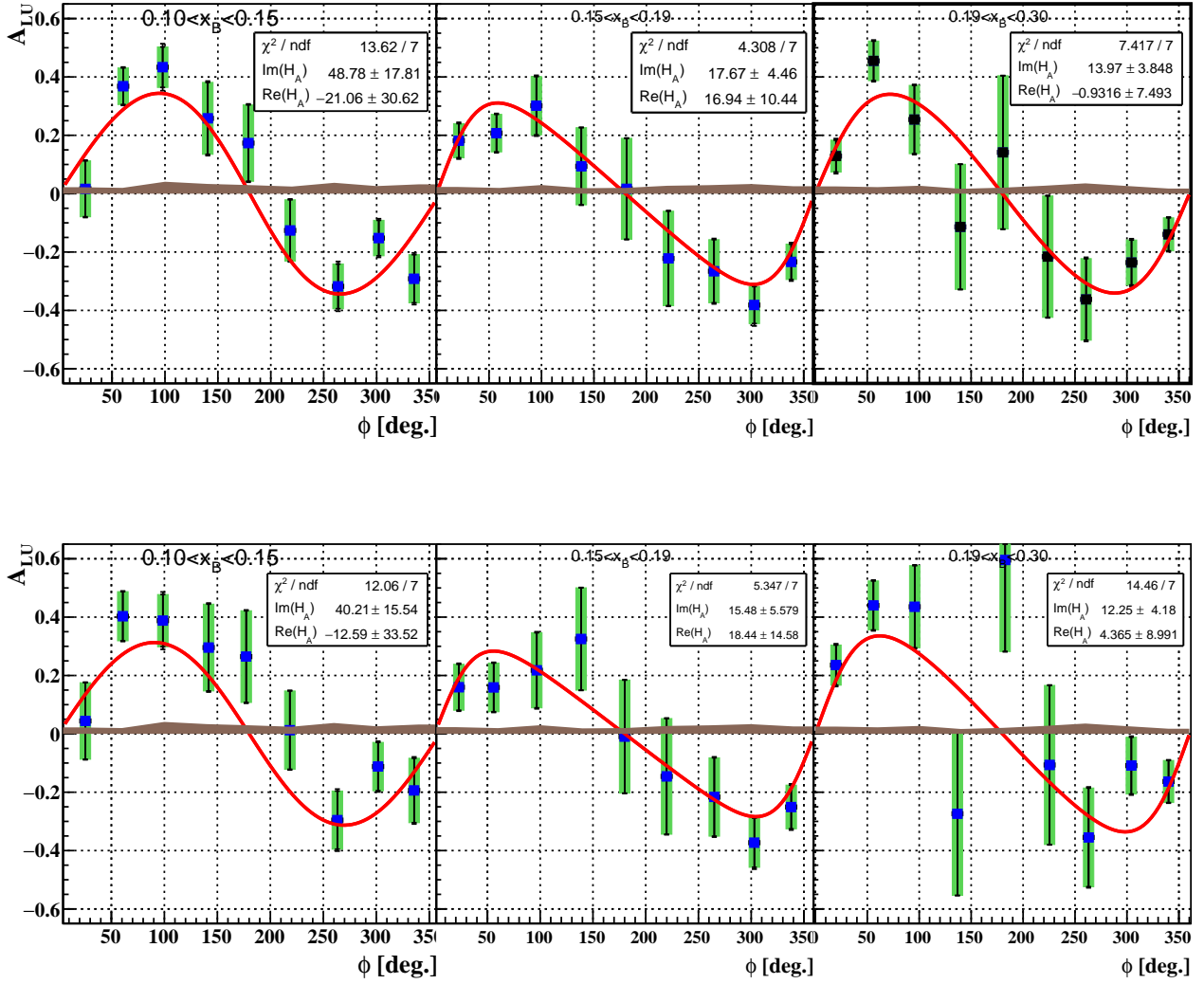


Figure 4: Coherent  $A_{LU}$  as a function of  $\phi$  in  $x_B$  bins for old (top) and new (bottom) selection sets.

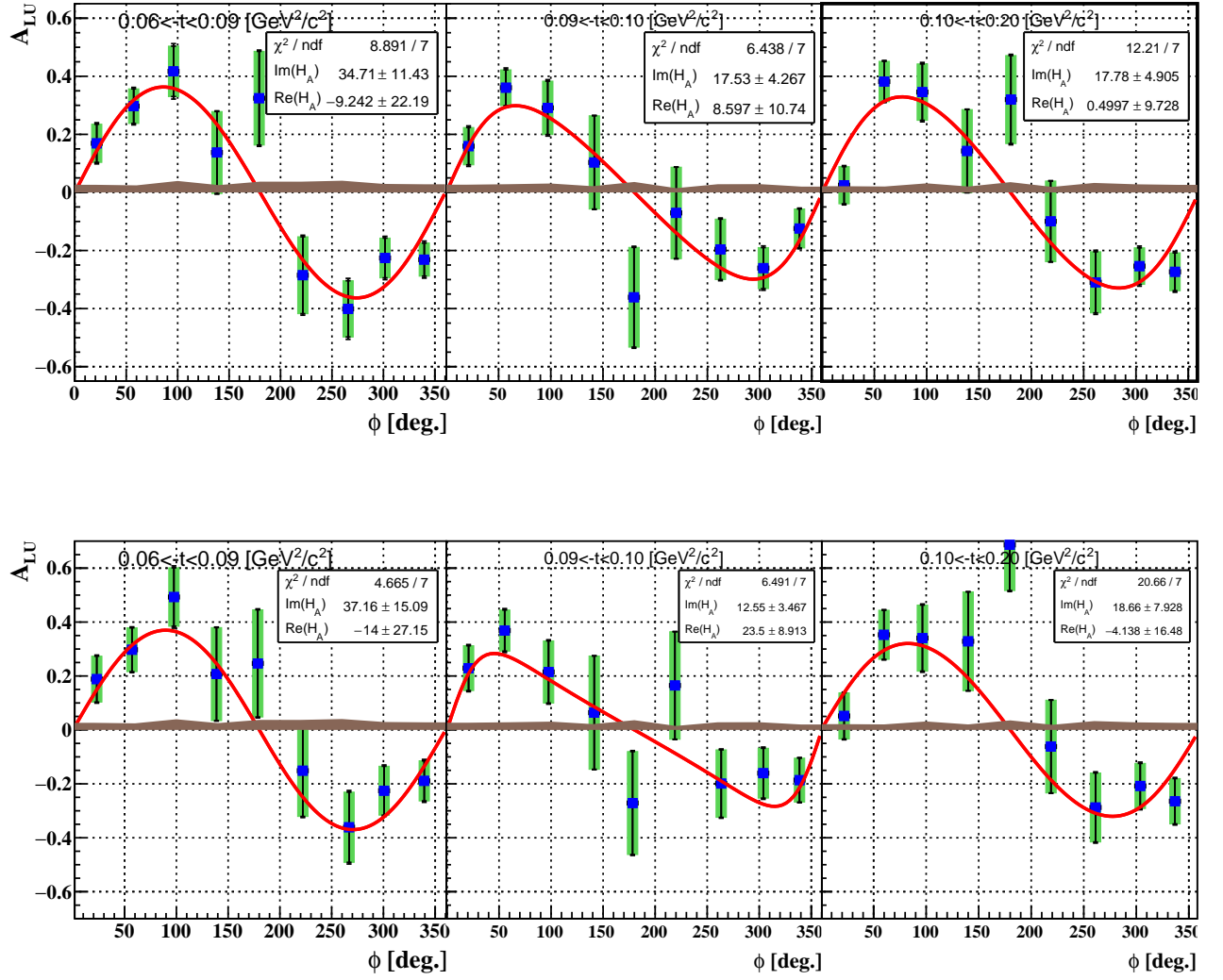


Figure 5: Coherent  $A_{LU}$  as a function of  $\phi$  in  $-t$  bins for old (top) and new (bottom) selection sets.

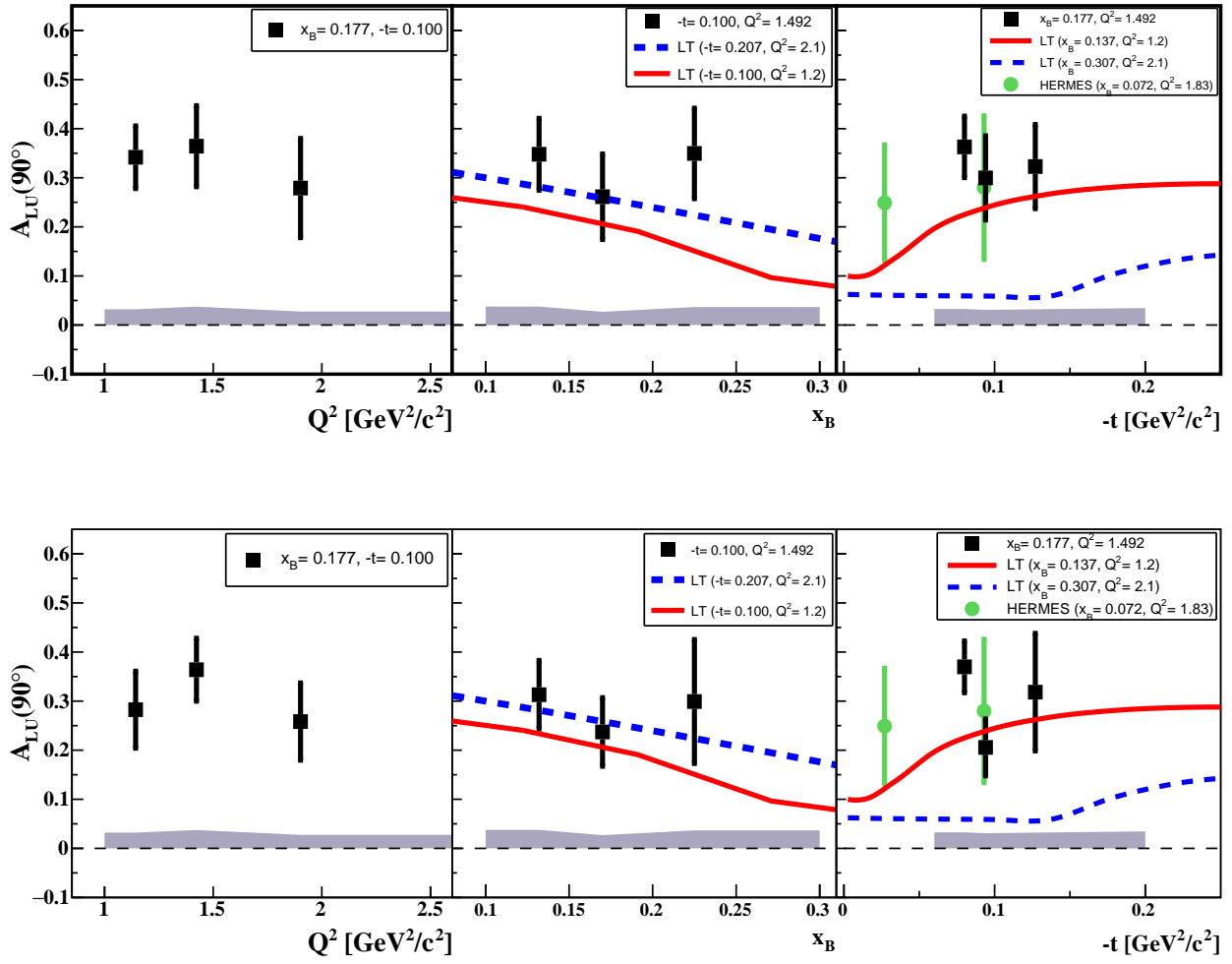


Figure 6: Coherent  $A_{LU}$  at  $\phi = 90^\circ$  for old (top) and new (bottom) selection sets.

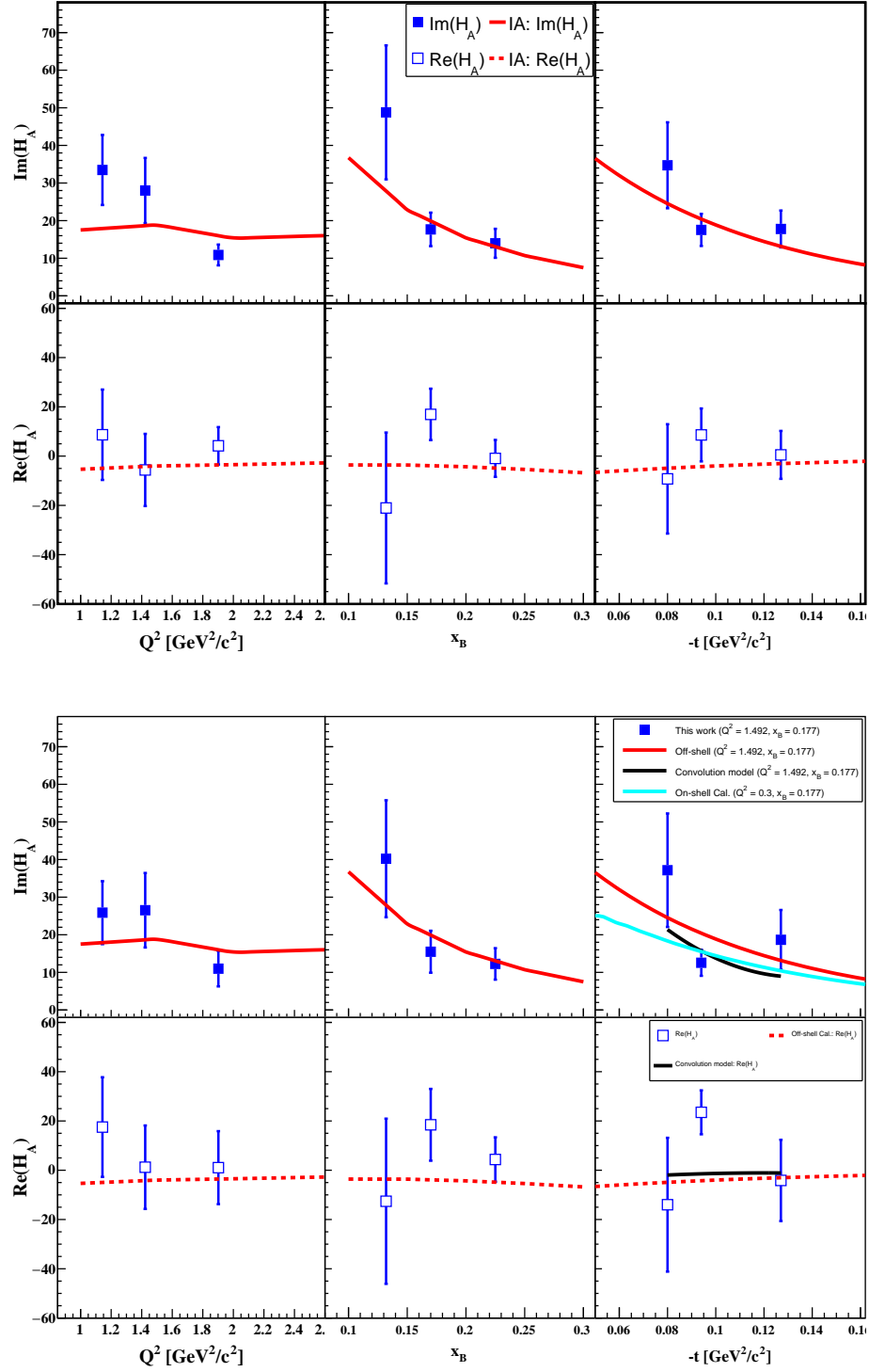


Figure 7:  $H_A$  CFF from old (top) and new (bottom) selection sets.